

REMARKS

Claims 1-15 are pending in this application. Claims 1, 13, and 14, the independent claims, have been amended to define still more clearly what Applicant regards as his invention.

Claims 1, 2, 7, 10, 11, and 13-15 were rejected under 35 U.S.C. § 103(a) as being obvious from U.S. Patent 6,301,303 to Chung et al. in view of U.S. Patent 6,173,013 to Suzuki et al.; Claims 3 and 4, as being obvious from Chung et al. and Suzuki et al. in view of U.S. Patent 5,774,548 to Bando et al.; Claim 5, as being obvious from Chung et al., Suzuki et al., and Bando et al. in view of U.S. Patent 6,295,380 to Takahashi; Claims 6, 8, and 9, as being obvious from Chung et al. and Suzuki et al. in view of Takahashi; and Claim 12, as being obvious from Chung et al. and Suzuki et al. in view of U.S. Patent 6,466,624 to Fogg.

The present invention is intended to provide improvements to data decoding processing of, for example, image and audio signals in a digital TV receiver or a digital storage medium reproduction apparatus. One particular aim of the present invention is to provide higher-quality images in accordance with subscription viewing or interactive programs.

Claim 1 is directed to a decoding apparatus, comprising an input unit, a separation unit, a judgment unit, a control unit, an outputting unit, and a synthesis unit. The input unit inputs a bitstream obtained by coding a plurality of object data in units of objects and multiplexing the coded data. The plurality of object data are data which provide a desired scalability in accordance with a combination among the plurality of object data. The separation unit separates coded data of each object from the bitstream,

and the judgment unit judges permission of reproduction of the coded data and a level of reproduction-permitted scalability. The control unit is adapted to perform reproduction-control according to the judged permission of reproduction and the level of reproduction-permitted scalability. The outputting unit decodes the coded data of the object in accordance with the control unit, and outputs the decoded data. The synthesis unit synthesizes the object data outputted by the outputting unit.

One notable feature of Claim 1 is to judge permission of reproduction of the coded data and a level of reproduction-permitted scalability, and then perform reproduction control according to the judged permission of reproduction and the judged level of reproduction-permitted scalability. By virtue of the features of Claim 1, fine and accurate reproduction control can be achieved according to the permission of reproduction and the level of reproduction permitted scalability.

Chung et al., as understood by Applicant, relates to predictively coding shape information of a video signal, and refers to VOP, or video object plane. Chung et al. discusses that a given video is divided into a background image and an object image, and a rectangle including the divided background image and object image is defined as a video object plane (VOP). (See column 2, lines 17-24.) In Fig. 1, an encoder 10 comprises a VOP formation unit 11, VOP coders 12A, 12B, ... , 12N and a multiplexer 13. The VOP formation unit 11 is adapted to input an image sequence to be transmitted or stored, divide the inputted image sequence into object images, and form VOPs corresponding respectively to the divided object images. The VOPs formed by the VOP formation unit 11 are respectively coded by the VOP coders 12A, 12B, . . . , 12N, multiplexed by the multiplexer 13, and transmitted as a bit stream. In Fig. 3, cited in the Office Action, a

decoder 20 comprises a demultiplexer 21, VOP decoders 22A, 22B, ..., 22N and a synthesizer 23. The VOP information coded and transmitted as the bit stream by the encoder 10 in Fig. 1 is divided into VOP coded signals by the demultiplexer 21. The VOP coded signals from the demultiplexer 21 are decoded respectively by the VOP decoders 22A, 22B, ..., 22N and synthesized into the original images by the synthesizer 23.

Therefore, Chung et al. discusses that an input bitstream is separated into coded data for each VOP, and the separated coded data are decoded and again synthesized together. However, nothing has been found in Chung et al. that would teach or suggest judging permission of reproduction of the coded data and a level of reproduction-permitted scalability, and then performing reproduction control according to the judged permission of reproduction and the judged level of reproduction-permitted scalability, as recited in Claim 1.

Suzuki et al., as understood by Applicant, relates to encoding enhancement and base layer image signals using a predicted image signal. The encoding apparatus is apparently capable of encoding an image signal in a scalable fashion. Suzuki et al. discusses that scalability is achieved by an appropriate combination of plural object data. However, nothing in Suzuki et al. teaches or suggests judging permission of reproduction of the coded data and a level of reproduction-permitted scalability, and then performing reproduction control according to the judged permission of reproduction and the judged level of reproduction-permitted scalability, as recited in Claim 1. As such, Suzuki et al. would not remedy the deficiencies of Chung et al. discussed above, even assuming a combination of the two would be permissible.

Accordingly, Claim 1 is believed to be patentable over Chung et al. and Suzuki et al., either alone or any permissible combination (if any).

Independent Claims 13 and 14 are method and computer-readable storage medium claims respectively corresponding to apparatus Claim 1, and are believed to be patentable for at least the same reasons as discussed above in connection with Claim 1. .

A review of the other art of record has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,


Attorney for Applicant

Registration No. 29,296

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200
#398170 v1